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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,674	12/02/2003	Gary Violand	35355	5092

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EXAMINER

ALI, MOHAMMAD M

ART UNIT PAPER NUMBER

3744

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/725,674

Applicant(s)

VIOLAND ET AL.

Examiner

Mohammad Ali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34 and 46-50 is/are allowed.
- 6) ☐ Claim(s) 1-4, 6-14, 18-21, 23-30, 33 and 35-39 is/are rejected.
- 7) ☒ Claim(s) 5, 15-17, 22, 31, 32 and 40-45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/02/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 4, 6, 9, 11, 14, and 35-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al., (4,948,040). Kobayashi et al., disclose an air conditioning system comprising a variable speed blower 16 to transport air from the system to the room, the blower 16 having substantially adjustable speed within a range as per auto fan or manual switch setting (Fig. 5), a user interface 35, a control unit 32, climate control unit 34, a heat exchanger 14, a virtual indicator/display 104, mode display 102/90, multiple keys 88, 92, 94, 96, 98, 100; a room thermostat 36, fan capacity setting means 42, fan capacity control means 46. See Fig. 1-2 and 506.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. Kobayashi disclose the invention substantially as claimed as stated above. However, Kobayashi et al., do not disclose speed of the fan assembly on the display. The display 104 displays both alpha and numerical display of the set value of

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the blower and air conditioning out puts as set by an user through the user interface 35.

Therefore, it is obvious that an individual skilled in the art specially for the thermostat/user interface 35 of Kobayashi et al., is able to adjust the input and out put of the thermostat to display the numerical value of the fan speed.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al., in view of Ho et al., (5,833,134). Kobayashi et al., disclose the invention substantially as claimed as stated above. However, Kobayashi et al., do not disclose remote control device. Ho et al., teach the use remote control device 12 in an HVAC system for the purpose of controlling the air conditioning system. See column Abstract and Fig. 4a-4c and 51-5c.. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air conditioning system of Kobayashi et al., in view of Ho et al., such that remote control system could be provided in order to control the air conditioning system.

4. Claims 10,12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al., in view of Faris et al., (US RE38,406 E). Kobayashi et al., disclose the invention substantially as claimed as stated above. However, Kobayashi et

al., do not disclose modulation of amplitude and pulse width. Faris et al., teach the use the modulation of amplitude and pulse width to control the fan speed in an HVAC system for the purpose of continuously controlling adjusting the fan speed. See column 2, lines 14-27. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air conditioning system of Kobayashi et al., in view of Faris et al., such that modulation system for amplitude and pulse width could be provided in order to control the fan speed.

5. Claims 18-21, 23, 26, 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al., in view of Duhua (6,744,172). Kobayashi et al., disclose the invention substantially as claimed as stated above. However, Kobayashi et al., do not disclose a single stator. Duhua teaches the use of a single stator motor for a fan in a cooling system for the purpose of generating cool air. See abstract. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air conditioning system of Kobayashi et al., in view of Duhua such that a fan motor with single stator could be provide in order to generate cool air..

6. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al., in view of Duhua as applied to claim 18 above and further in view of Ho et al., (5,833,134). Kobayashi et al., in view of Duhua disclose the invention substantially as claimed as stated above. However, Kobayashi et al., in view of Duhua do not disclose remote control device. Ho et al., teach the use remote control device 12 in an HVAC system for the purpose of controlling the air conditioning system. See column Abstract and Fig. 4a-4c and 51-5c. Therefore, it would have been obvious to

one having ordinary skill in the art at the time the invention was made to modify the air conditioning system of Kobayashi et al., in view of Duhua and further in view of Ho et al., such that remote control system could be provided in order to control the air conditioning system.

7. Claims 27-28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al., in view of Duhua as applied to claim 18 above and further in view of Faris et al., (US RE38,406 E). Kobayashi et al., in view of Duhua disclose the invention substantially as claimed as stated above. However, Kobayashi et al., in view of Duhua do not disclose modulation of amplitude and pulse width.. Faris et al., teach the use the modulation of amplitude and pulse width to control the fan speed in an HVAC system for the purpose of continuously controlling adjusting the fan speed. See column 2, lines 14-27. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air conditioning system of Kobayashi et al., in view of Duhua and further in view of Faris et al., such that modulation system for amplitude and pulse width could be provided in order to control the fan speed.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al., in Hara (5,201,192)). Kobayashi et al., disclose the invention substantially as claimed as stated above. However, Kobayashi et al., do not disclose frost sensor. Hara teach the use of a defrost sensor S1 in an air conditioning system for the purpose of sensing frost condition on the surface of evaporator/heat exchanger 41 and thereby initiating a defrost cycle to defrost the evaporator. See Fig. 3 and column 4,

lines 9-26. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the air conditioning system of Kobayashi et al., in view of Hara such that a frost sensing arrangement for the evaporator could be provided in order to control the defrost problem.

Allowable Subject Matter

9. Claims 5, 15-17, 22, 31-32 and 40-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 34, 46-50 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is 703-308-5032. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Esquivel Denise can be reached on 703-308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Md. Mohsin Ali
Mohammad M. Ali
March 22, 2005